Callsign/ File	Master	Remote	Location	Lat	Long	Emission	EIRP (dBm)
WNER834	952.2375	928.2375	Troy, MI	423336	830939	15K0F2D	39.3
WNTH886	952.3375	928.3375	Pontiac, MI	423753	831728	25K0F2D	52.0
767084	952.3375	928.3375	Brighton, MI	423300	834134	25K0F3D	52.0
768760	952.3375	928.3375	Stony Creek, MI	415726	831530	25K0F3D	52.0
768761	952.3375	928.3375	Utica, MI	423842	830431	25K0F3D	52.0
768762	952.3375	928.3375	Ann Arbor, MI	421641	834433	25K0F3D	52.0
771240	952.3375	928.3375	Taylor, MI	421156	831415	25K0F3D	52.0
766713	952.50625	928.50625	Macomb, MI	423811	825455	12K0F9W	37.0
WNEQ344	952.5375	928.5375	Clinton, MI	420522	835453	16K0F2D	47.1
WNEQ812	952.5625	928.5625	Detroit, MI	422002	830328	16K0F2D	37.0
WNTB637	952.59375	928.59375	Jackson, MI	420922	842339	12K0F2D	44.7
766817	952.63125	928.63125	Clinton, MI	423531	825701	12K0F9W	37.0
766347	952.65625	928.65625	Davisburg, MI	424627	832938	12K5F1D	42.3
WNEM576	952.6625	928.6625	Defiance, OH	412141	841802	16K0F2D	48.0
WEG842	952.8		Flint, MI	430027	833954	100KF8W	55.8
** CLEVELAND AREA							
KNKM639	928.9625		Chesterland, OH	412754	811713	16K0F3E	47.0*
771106	952.0875	928.0875	Elyria, OH	412209	820634	25K0F1W	37.0
WNEP451	952.0125	928.0125	Boston, OH	411547	813649	16K0F2D	43.5
WNEP452	952.0125	928.0125	Broadview Heights, OH	411852	813957	16K0F2D	43.5
WNEP445	952.0125	928.0125	Cleveland, OH	412950	814150	16K0F2D	43.5
WNEP449	952.0125	928.0125	Warrensville Hghts, OH	412648	813020	16K0F2D	43.5
WNEX398	952.1625	928.1625	Parma, OH	412315	814143	25K0F2D	48.5
758007	952.1625	928.1625	Parma, OH	412147	814258	25K0F9W	48.5
WNEP294	952.2125	928.2125	Cleveland, OH	412955	814142	16K0F2D	32.4
769777	952.51875	928.51875	Cleveland, OH	412921	813608	12K5F9W	44.7
WNER841	952.6875	928.6875	Thompson, OH	414138	810302	25K0F2D	43.9
** BUFFALO AREA							
KEA777	928.8625		Harris Hill, NY	425750	783813	16K0F3E	47.0*
WNER435	928.8875		Buffalo, NY	425252	785232	16K0F3E	47.0*
WNEH517	952.0375	928.0375	Buffalo, NY	425747	785236	15K0F2D	39.3
WNER434	952.0625	928.0625	Cheektowaga, NY	425652	784000	16K0F2D	48.2
WNEH821	952.0875	928.0875	Buffalo, NY	425247	785237	16K0F2D	41.0
WNEH517	952.2375	928.2375	Buffalo, NY	425747	785236	15K0F2D	39.3
WNER435	959.8875	928.8875	Buffalo, NY	425252	785232	16K0F2D	41.1

Communications Canada

300 Slater Street
Ottawa, Ontario
K1A 0C8

May 3, 1988

Your file Votre référence

Our file 4545-2 Notre référence

Mr. Bruce A. Franca
Deputy Chief Engineer
Office of Engineering and Technology
Federal Communications Commission
2025 M Street NW
Washington, D.C.

Dear Bruce:

This in response to your letter of April 20, 1988, concerning the coordination of paging systems in the band 929-932 MHz.

On the first issue raised in your letter, we have no objection on your request that the 75 miles be restated as "line A", since they virtually embody the same geographical area required for sharing of the band 929-932 MHz.

Regarding the issue of the coordination of U.S. paging requests between 75 and 250 miles of the border, it was not addressed in the document titled "Further Interim Coordination Consideration for the Shared 931-932 MHz" signed February 10, 1987. As you may be aware, this was stated in the "Interim Coordination Considerations for the Band 929-932 MHz" signed September 14, 1983. Since we have been using these interim documents for some time, I propose that we put together one agreement for this band based on these interim documents and finalize it to the extent needed. We will prepare a draft and send it to you for comments sometime in June, 1988. Until this agreement is finalized, we will continue to use the interim documents and the basis given in DOC letter of October 2, 1987 and your letter of April 20, 1988.

Yours truly,

Kawat

for

R.W. McCaughern
Deputy Director General

ANNEX

PROCEDURE FOR COORDINATION OF
US PAGING REQUESTS IN THE 929-932 MHZ BAND
BETWEEN 75 MILES AND 250
MILES FROM THE US/CANADA BORDER

1. Coordination beyond 75 miles will be required with the Canadian microwave links in List 1 appended.

2. Coordination distance of 250 miles will apply to an arc of $\pm 30^{\circ}$ from the receive azimuth as given in List 1.

3. For all other angles a coordination distance of 100 miles will apply.

4. The above criteria will also apply to "fill-in" paging stations beyond 75 miles of the border.

5. Existing coordination Interim agreements procedures will apply to all proposals within 75 miles of the border. line "A"

NOTE: This Annex modifies the Interim Agreement for 931-932 MHz. This modification will be reflected in the final arrangement to be developed for this band.

TERRESTRIAL MICROWAVE LINKS POTENTIALLY AFFECTED BY U.S. 900 MHZ PAGING

NON-FREQUENCY DIVERSITY

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820	BEAVER CREEK YT.	LAT. 62 21 58 LONG 140 52 04	5 MI	353.2°
Tx TO 892.0200	MOUNT DAVE	LAT. 62 35 40 LONG 140 55 36	1 MI	173.2°
930.820	BURWASH YT	LAT. 61 19 15 LONG 138 57 29	68 MI	132.1°
Tx TO 892.0200	DESTRUCTION BAY	LAT. 61 15 13 LONG 138 48 12	73 MI	312.2°
930.820	GRAHAM Camp 601	LAT. 49 14 51 LONG 090 35 06	70 MI	25.3° T
Tx TO 892.0200	CAMP 602	LAT. 49 33 50 LONG 90 21 15	82 MI	205.5° R
930.820	RIVIERE DU LOUP	LAT. 47 49 10 LONG 069 31 12	30 MI	42.1° T
Tx TO 892.0200	ST. ARSENE	LAT. 47 55 08 LONG 69 23 08	32 MI	222.1° R

FREQUENCY DIVERSITY

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820 946.340	SALTSPRING ISLAND	LAT. 48 45 57 LONG 123 30 39	12 MI	75.3° Tx
Tx TO PENDER ISLAND 892.0200 907.5400		LAT. 48 48 17 LONG 123 17 06	8 MI	255.4° Rx
930.820 946.340	DORION ONT.	LAT. 48 47 42 LONG 088 32 42	35 MI	41.5° Tx
Tx TO NIPIGON 892.0200 946.3400		LAT. 48 58 18 LONG 88 18 24	48 MI	221.7° Rx
30.820 946.340	GAGNE ONTARIO	LAT. 48 43 33 LONG 092 53 36	12 MI	80.3° Tx
Tx TO MINE CENTRE ONT 892.0200 907.5400		LAT. 48 45 36 LONG 92 37 03	17 MI	259.5° Rx
930.820 946.340	JACKPINE ONT.	LAT. 47 56 48 LONG 084 11 37	80 MI	12.4° Tx
Tx TO MISSANABIE 892.0200 907.5400		LAT. 48 19 11 LONG 84 04 12	103 MI	192.5° Rx
930.820 946.340	MORSON ONT.	LAT. 49 05 50 LONG 094 19 05	18 MI	26.4° Tx
Tx TO NESTOR FALLS 892.0200 907.5400		LAT. 49 07 07 LONG 93 55 30	35 MI	265.4° Rx

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820 946.340	OPISHING ONT.	LAT. 48 14 18 LONG 081 52 18	170 MI	58.2° Tx
Tx	TO TIMMINS 892.0200 907.5400	LAT. 48 27 56 LONG 81 18 14	190 MI	238.6° Rx
930.820 935.000	CENTRALE BEAUHARNOIS	LAT. 45 18 48 LONG 73 54 18	25 MI	255.1° Tx
Tx	TO POSTE MGR EMARD 892.8200 945.5000	LAT. 45 16 35 LONG 74 06 06	20 MI	75.1° Rx

92-160

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

April 20, 1988

IN REPLY REFER TO

R. W. McCaughern
Deputy Director General
Engineering Programs Branch
Department of Communications
300 Slater Street
Ottawa, Ontario K1A 0C8

Dear Mr. McCaughern:

This is in response to your letter of October 2, 1987, concerning coordination of 929-932 MHz paging systems and exchange of frequency 931.8625 MHz for 931.0875 MHz.

We agree to the procedures you have outlined for 929-932 MHz coordination of U.S. paging requests between 75 miles and 250 miles from the U.S./Canada border with two modifications. We request that where you have stated 75 miles, this be restated as "line A". As you are probably aware, this will facilitate our coordination process as our computer programs are already written based on "line A". We also wish to include a statement that this proposal would not alter the "Further Interim Coordination Consideration for the Share, 931-932 MHz" signed February 10, 1987.

We shall consider the exchange of frequencies as final.

Thnak you for your consideration of this matter.

Sincerely,

Bruce A. France
Deputy Chief Engineer
Office of Engineering
and Technology

cc: Wendell R. Harris - Common Carrier Bureau
Ed Jacobs - Private Radio Bureau
Veena Rawat - Department of Communications

Government of Canada
Department of Communications

Gouvernement du Canada
Ministère des Communications

300 Slater Street
Ottawa, Ontario
K1A 0C8

92-1601

1

Your file / Votre référence

Our file / Notre référence 4545-2

October 2, 1987

Mr. Bruce A. France
Deputy Chief Engineer
Office of Engineering and Technology
Federal Communications Commission
2025 M Street NW
Washington, D.C.

RE: FCC/DOC MEETING OF JULY 14-15, 1987

Dear Bruce:

The purpose of this letter is to respond to two of the action items from our meeting of July 14-15, 1987. These items concern paging systems in the 900 MHz band (929-932 MHz). Other action items are being dealt with separately.

On the issue of the need to coordinate US paging requests between 75 and 250 miles of the border, I suggest that this be dealt with as described in the Annex to this letter. The issue will be dealt with in more detail in the finalization of the present Interim agreements for 900 MHz paging.

We have considered the request for the frequency 931.8625 MHz and the proposed swap with 931.0875 MHz and find this acceptable to us on a nationwide basis.

R. W. McCaughern
Deputy Director General
Engineering Programs Branch

Att.

Canada

copied from fax copy obtained by CCB 1/4 brought to Treaty Branch by Mike Pollack on 2/8/88 3:15 PM

ANNEX

PROCEDURE FOR COORDINATION OF
US PAGING REQUESTS IN THE 929-932 MHZ BAND
BETWEEN 75 MILES AND 250
MILES FROM THE US/CANADA BORDER

1. Coordination beyond 75 miles will be required with the Canadian microwave links in List 1 appended.

2. Coordination distance of 250 miles will apply to an arc of $\pm 30^{\circ}$ from the receive azimuth as given in List 1.

3. For all other angles a coordination distance of 100 miles will apply.

4. The above criteria will also apply to "fill-in" paging stations beyond 75 miles of the border.

5. Existing coordination Interim agreements procedures will apply to all proposals within 75 miles of the border.

line "A"

NOTE: This Annex modifies the Interim Agreement for 931-932 MHz. This modification will be reflected in the final arrangement to be developed for this band.

TERRESTRIAL MICROWAVE LINKS POTENTIALLY AFFECTED BY U.S. 900 MHZ PAGING

NON-FREQUENCY DIVERSITY

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820	BEAVER CREEK YT.	LAT. 62 21 58 LONG 140 52 04	5 MI	353.2° Tx
Tx TO 892.0200	MOUNT DAVE	LAT. 62 35 40 LONG 140 55 36	1 MI	173.2° Rx
930.820	BURWASH YT	LAT. 61 19 15 LONG 138 57 29	68 MI	132.1° Tx
Tx TO 892.0200	DESTRUCTION BAY	LAT. 61 15 13 LONG 138 48 12	73 MI	312.2° Rx
930.820	GRAHAM Camp 601	LAT. 49 14 51 LONG 090 35 06	70 MI	25.3° Tx
Tx TO 892.0200	CAMP 602	LAT. 49 33 50 LONG 90 21 15	82 MI	205.5° Rx
930.820	RIVIERE DU LOUP	LAT. 47 49 10 LONG 069 31 12	30 MI	42.1° Tx
Tx TO 892.0200	ST. ARSENE	LAT. 47 55 08 LONG 69 23 08	32 MI	222.1° Rx

FREQUENCY DIVERSITY

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820 946.340	SALTSPRING ISLAND	LAT. 48 45 57 LONG 123 30 39	12 MI	75.3° Tx
Tx TO PENDER ISLAND 892.0200 907.5400		LAT. 48 48 17 LONG 123 17 06	8 MI	255.4° Rx
930.820 946.340	DORION ONT.	LAT. 48 47 42 LONG 088 32 42	35 MI	41.5° Tx
Tx TO NIPIGON 892.0200 946.3400		LAT. 48 58 18 LONG 88 18 24	48 MI	221.7° Rx
30.820 946.340	GAGNE ONTARIO	LAT. 48 43 33 LONG 092 53 36	12 MI	80.3° Tx
Tx TO MINE CENTRE ONT 892.0200 907.5400		LAT. 48 45 36 LONG 92 37 03	17 MI	259.5° Rx
930.820 946.340	JACKPINE ONT.	LAT. 47 56 48 LONG 084 11 37	80 MI	12.4° Tx
Tx TO MISSANABIE 892.0200 907.5400		LAT. 48 19 11 LONG 84 04 12	103 MI	192.5° Rx
930.820 946.340	MORSON ONT.	LAT. 49 05 50 LONG 094 19 05	18 MI	26.4° Tx
Tx TO NESTOR FALLS 892.0200 907.5400		LAT. 49 07 07 LONG 93 55 30	35 MI	265.4° Rx

FREQUENCY	SITE NAME	GEOG. COORD.	APPROX DIST. TO BORDER	AZIMUTH
930.820 946.340	OPISHING ONT. --	LAT. 48 14 18 LONG 081 52 18	170 MI	58.2° Tx
Tx	TO TIMMINS 892.0200 907.5400	LAT. 48 27 56 LONG 81 18 14	190 MI	238.6° Rx
930.820 935.000	CENTRALE BEAUHARNOIS	LAT. 45 18 48 LONG 73 54 18	25 MI	255.1° Tx
Tx	TO POSTE MGR EMARD 892.8200 945.5000	LAT. 45 16 35 LONG 74 06 06	20 MI	75.1° Rx

92-160

FURTHER INTERIM COORDINATION CONSIDERATION FOR THE SHARED 931-932 MHZ

For paging frequencies in the 931-932 MHZ band (allocated in the U.S. for common carrier paging), the FCC and the DOC agree that the equal access principle will apply for the sharing of this band and the principles used in the 800 MHz band will apply.

Therefore, between 81 degrees W and 85 degrees W including Detroit and Cleveland 26 out of the 37 available paging frequencies will be processed as such by the DOC for coordination purposes within 75 miles of the border. Between 78 degrees W - 81 degrees W, including Buffalo, and between 73 degrees W - 75 Degrees West, 11 paging frequencies will be processed within 75 miles of the border. In other areas, a maximum of 19 frequencies will be processed by the DOC. These frequencies will be contiguous and restricted to the lower end of the 931-932 band with 25 Khz channel spacing.

In Canada, between 73 degrees W to 75 degrees W and 78 degrees W to 81 degrees W., including Montreal and Toronto/Niagara Fall/St. Catherines, respectively, 26 out of 37 available paging frequencies will be processed by the FCC for coordination purposes within 75 miles of the border. Between 81 & 85 degrees, 11 frequencies will be available for paging in the Windsor area.

In all other areas, a maximum of 18 frequencies will be processed by the U.S. These frequencies will be contiguous and restricted to the upper end of the band 931-932 MHz with 25 kHz channel spacing.

In the U.S., the three frequencies 931.8875, 931.9125, and 931.9375 MHz have been allocated for nationwide paging. Canada also intends to use these frequencies for nationwide paging.

The authorization of each network organizer for the use of these nationwide frequencies will be conditioned as follows:

United States Condition

This authorization is subject to the condition that, in the event a Canadian system using the same frequency as granted herein is authorized in adjacent territory in Canada, coordination of all transmitter installations which are within 75 miles of the U.S.-Canada border shall be required to eliminate any harmful interference that might otherwise exist and to insure continuance of equal access to the frequency by both countries, including the use of time-sharing or other techniques.

Canada Condition

This authorization is subject to the condition that, in the event a United States system using the same frequency as granted herein is autnorized in adjacent territory in the United States coordination of all transmitter installations, which are within 75 miles of the U.S.-Canada border, shall be required to eliminate any harmful interference that might otnerwise exist and to insure continuance of equal access to the frequency by both countries, including the use of time-sharing or other techniques.

W. Harris
Assistant Bureau Chief/International
Common Carrier Bureau
FCC

N. Ahmed
Director General
Engineering Program Branch
DOC

February 10, 1987

92-160

Interim Coordination Considerations for the Band 929 - 932 MHz

Considering FCC allocation to paging in the band 929 - 932 MHz and protection to existing fixed assignments and future usage of this band in Canada, the following interim steps will be used to process FCC requests for coordination within 250 miles from the border:

1) DOC will immediately process all coordination requests from the Common Carrier Bureau which are beyond 75 miles from the border, taking into account existing Canadian fixed stations.

   W. Harris/FCC, will provide DOC at the next FCC/DOC Liaison Committee meeting to be held on October 18, 19, 1983 a frequency assignment plan within 75 miles of the border in the One MHz allocated for Common Carrier paging.

2) DOC will immediately process applications from the Private Radio Bureau in the band 929.5 to 930.0 MHz within 75 miles of the border and in the band 929.0 to 930.0 MHz beyond 75 miles of the border and less than 250 miles of the border, taking into account existing Canadian fixed stations. The Private Radio Bureau/R. Foosaner, agrees to withhold assignments in the band 929.0 - 929.5 MHz within 75 miles from the border.

3) Based on interest shown in Canada for extending the U.S. 900 MHz nationwide paging into Canada, this matter will be further discussed in the FCC/DOC Technical Liaison Committee and considered in the development of sharing methodology for this band.

The above steps will be used in the interim for FCC coordination request for paging in the band 929-932 MHz pending establishment of a sharing arrangement for this band taking into account Canada's suggestion for a block sharing arrangement and the current frequency assignment plan of the Common Carrier Bureau. It is agreed that the sharing arrangement will be based on the basic principle of equal cross-border sharing of the band 929-932 MHz. This principle will include discussions concerning the re-assignment of existing fixed stations where necessary in order that equitable sharing may be achieved.

Discussions on the sharing arrangements will begin immediately with the targets of establishing the points of consideration and approach to be followed at the October 1983 meeting of the US/Canada Technical Liaison Committee followed by completion of the discussions by the end of December 1983.

G.R. Begley	P. Davis	R.W. Jones	R. Foosaner
Engineering Prog.	Spectrum Policy	Operations Br.	FCC, Chief
DOC	DOC	DOC	Private Radio Bureau

September 14, 1983

92-160

EXCHANGE OF NOTES BETWEEN THE GOVERNMENT OF CANADA AND THE GOVERNMENT OF THE UNITED STATES OF AMERICA AMENDING THE AGREEMENT OF OCTOBER 24, 1962 FOR THE COORDINATION AND USE OF RADIO FREQUENCIES ABOVE 30 MEGACYCLES PER SECOND, AS AMENDED

Washington, February 26 & April 7, 1982

In force April 7, 1982

ECHANGE DE NOTES ENTRE LE GOUVERNEMENT DU CANADA ET LE GOUVERNEMENT DES ETATS-UNIS D'AMERIQUE MODIFIANT L'ACCORD DU 24 OCTOBRE 1962 POUR LA COORDINATION ET L'UTILISATION DES FREQUENCES RADIOPHONIQUES DE PLUS DE 30 MEGACYCLES PAR SECONDE, DANS SA FORME MODIFIEE

Washington les 26 février et 7 avril 1982

En vigueur le 7 avril 1982

Canadian Embassy Ambassade du Canada

WASHINGTON, February 25, 1982.

No. 76

Sir,

I have the honour to refer to the exchange of Notes between Canada and the United States of America dated October 24, 1962 concerning the Coordination and Use of Radio Frequencies Above 30 Megacycles Per Second and to the exchange of Notes of June 6 and 24, 1965 amending the Technical Annex of the said Agreement.

During a series of discussions concerning the operation of fixed and mobile radio services along the border, the representatives of our two Governments have reached an understanding which is embodied in the "Arrangement between the Department of Communications of Canada and the National Telecommunications and Information Administration and the Federal Communications Commission of the United States concerning the Use of the 406.1 to 430 MHz Band in Canada/United States Border Areas" annexed to this Note.

This Arrangement should be annexed to the above-mentioned Agreement as Arrangement E. The Index to the Technical Annex should be modified in order to add, after item 33, a new item which would read as follows:

... 2

The Honourable Alexander M. Haig, Jr.,
Secretary of State,
Washington, D. C. 20520.

Item	Frequency Bands MC/S	Authorized Coordination Agencies or Channels		Coordinating Agreements and Remarks
		U.S.	Canada	
33 bis	406.1-430	NTIA	DOC	Arrangement E

In view of the fact that the United States has not decided how the 421 to 430 MHz band will be shared between the Government and the non-Government users of the spectrum, it may be necessary, once this decision has been made, to change the coordination channel for stations in the fixed and mobile services operating in the band 421 to 430 MHz.

If the proposals outlined above are acceptable to the Government of the United States, I have the honour to propose that this Note, which is authentic in English and French, and your reply to that effect shall constitute an agreement between our two Governments which shall enter into force on the date of your reply.

Accept, Sir, the renewed assurances of my highest consideration.

Ambassador

ARRANGEMENT BETWEEN THE DEPARTMENT OF COMMUNICATIONS OF CANADA AND THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION AND THE FEDERAL COMMUNICATIONS COMMISSION OF THE UNITED STATES CONCERNING THE USE OF THE 406.1 MHz to 430 MHz BAND IN CANADA - UNITED STATES BORDER AREAS.

1. General

1.1 This Arrangement between the Department of Communications of Canada and the National Telecommunications and Information Administration and the Federal Communications Commission of the United States, herein referred to as the Agencies, provides for the operation of Canadian Fixed and Mobile Services and United States Fixed and Mobile Services in the 406.1-430 MHz band and United States Radiolocation Service in the 420-430 MHz band. In accordance with the international Table of Frequency Allocations contained in the Final Acts of the World Administrative Radio Conference (Geneva, 1979), aeronautical mobile radio services are excluded from the band 406.1 to 430 MHz.

1.2 Section 6 of this Arrangement sets forth the conditions for the shared use of the 420-430 MHz band by the Fixed and Mobile Services in Canada (the Mobile Service being primary and Fixed Service being secondary in Canada) and the Radiolocation Service in the United States (the Radiolocation Service being primary in the United States).

1.3 The areas involved in this Arrangement concerning sharing by the Canadian and United States Fixed and Mobile Services are those set forth in sub-paragraph 2 (a) of Arrangement D of this Agreement; hereafter these areas are referred to in this Arrangement as the Coordination Zone.

1.4 For the purpose of coordinating assignments to stations in the Fixed and Mobile Services in the 406.1-430 MHz band with 25 kHz spacing between channels and 16 kHz necessary bandwidth, a minimum interstitial channel (12.5 kHz offset) selectivity of 25 dB will be assumed. The standard definition and method of measurement is defined in the United States Electronic Industries Association (EIA) specification RS-204 B, titled 'Adjacent Channel Selectivity and Desensitization', dated April 1980.

1.5 The coordination channel for this Arrangement is the Department of Communications in Canada and the National Telecommunications and Information Administration in the United States, in accordance with the procedures of Arrangement D of this Agreement.

2. Exceptions

2.1 It is recognized that in the band 406.1-420 MHz there are limited requirements for airborne operations. When the possibility exists that assignments outside of the normal Coordination Zone might result in harmful interference to the radio services of the other country due to their particular circumstances, i.e., aircraft altitude, power, etc., the assignment of the frequencies involved will, to the extent practicable, be subject to special coordination between the National Telecommunications and Information Administration and the Department of Communications.

2.2 The Amateur Service is excluded from the band 420-430 MHz in the Coordination Zone. Additionally, airborne operations associated with stations in the Fixed and Mobile Services are excluded from this band.

2.3 Stations in the Fixed and Mobile Services will not operate in the 420-430 MHz band within 250 km of the United States-Canada border in the state of Alaska or the Yukon Territory.

3. The Use of the 406.1 - 420 MHz Band by the Fixed and Mobile Services

3.1 Proposed frequency assignments in this band are subject to coordination between the Department of Communications and the National Telecommunications and Information Administration in accordance with the procedures of Arrangement D of this Agreement.

3.2 Except for the bands identified in paragraph 3.6, the frequencies identified in paragraph 3.7 and the band identified in paragraph 3.9, all existing frequency assignments in the two countries which are included in the lists appended to this Arrangement as Annex A (Canada) and Annex B (United States) are accepted as coordinated by the Department of Communications and the National Telecommunication and Information Administration and have equal status under this Agreement.

3.3 The United States will channel and use the band for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart, from 406.125 to 419.975 MHz inclusive. Canada will channel and use the band for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 406.1125 to 419.9875 MHz inclusive.

3.4 The use of a necessary bandwidth greater than 16 kHz is discouraged but is permitted as an exception subject to coordination on a case by case basis in accordance with the procedures specified in Arrangement D of this Agreement.

3.5 Canada, within its Coordination Zone, agrees to protect the existing and future unrestricted geographic use in the United States of the bands 406.1875 - 406.4625 and 408.6875 - 408.9625 MHz. Coordination with Canada of assignments in the United States in these bands is not required.

3.6 Use of the bands 406.1875 - 406.4625 and 408.6875 - 408.9625 MHz by Canada within its Coordination Zone is to be coordinated on a case by case basis and must meet the terms of 3.5 above. It is understood that any such Canadian use of these bands will only be attempted as a last resort when a requirement cannot be met outside these bands. Any such coordinated radio system must be adjusted or removed if it causes interference to existing United States radio systems or is anticipated to cause interference to planned United States radio systems.

3.7 Canada, within its Coordination Zone, agrees to protect the existing and future unrestricted geographic use in the United States of the following center frequencies with 16 kHz or less necessary bandwidth (all MHz):

415.850	416.000	418.475
415.875	416.025	418.500
415.900	418.375	418.525
415.925	418.400	418.550
415.950	418.425	418.600
415.975	418.450	

Coordination with Canada of assignments in the United States on these frequencies is not required.

3.8 Canadian use of the above listed center frequencies within its Coordination Zone is to be coordinated on a case by case basis and must meet the terms of 3.7 above. It is understood that any such Canadian use of these frequencies will only be attempted as a last resort when a requirement cannot be met on other frequencies. Any such coordinated radio system must be adjusted or removed if it causes interference to existing United States radio systems or is anticipated to cause interference to planned United States radio systems.

3.9 With the exception of United States use of the frequency 409.625 MHz, the United States, within its Coordination Zone, agrees to protect the existing and future unrestricted geographic use in Canada of the band 409-410 MHz. Canadian use of the 409-410 MHz band is primarily for mobile stations paired with base stations in the 420-421 MHz band. Coordination with the United States of assignments in Canada in this band is not required. The protection of the existing and future unrestricted geographic use of the frequency 409.625 MHz in the United States is based on 16 kHz necessary bandwidth.

3.10 With the exception of the United States use of the frequency 409.625 MHz, other use of the 409-410 MHz band by the United States within its Coordination Zone is to be coordinated on a case by case basis and must meet the terms of 3.9 above. It is understood that any such United States use of the 409-410 MHz band within its Coordination Zone will only be attempted as a last resort when a requirement cannot be met outside the band. Any such coordinated radio system must be adjusted or removed if it causes interference to existing Canadian radio systems or is anticipated to cause interference to planned radio systems.

3.11 It is recognized that Canada and the United States have unrestricted geographic use of the bands and/or frequencies specified in 3.5, 3.7 and 3.9. When the possibility exists that assignments outside the Coordination Zone may result in harmful interference to the radio services of the other country, due to the particular characteristics of such assignments (e.g., antenna height, power, directive arrays, etc.), special coordination may be initiated by that Agency which does not have the unrestricted geographic use.

4.0 The Use of the 420-421 MHz Band by the Fixed and Mobile Services

4.1 The United States, within its Coordination Zone, agrees to protect the existing and future unrestricted geographic use in Canada of the band 420-421 MHz from Fixed and Mobile Services. Canadian use of the 420-421 MHz band is primarily for base stations paired with mobile stations in the 409-410 MHz band. Coordination with the United States of assignments in Canada in this band is not required, except as specified in 6.3.

4.2 United States use of the 420-421 MHz band within its Coordination Zone is to be coordinated on a case by case basis and must meet the terms of 4.1 above. It is understood that any such United States use of 420-421 MHz within its Coordination Zone will only by attempted as a last resort when a requirement cannot be met outside the band. Any such coordinated radio system must be adjusted or removed if it causes interference to existing Canadian radio systems or is anticipated to cause interference to planned radio systems.

4.3 It is recognized that Canada has unrestricted geographic use in Canada of the band 420-421 MHz, except as specified in Section 6. When the possibility exists that assignments in the Fixed and Mobile Services outside of the Coordination Zone in the United States might result in harmful interference to the radio services in Canada, due to the particular characteristics of the U.S. assignments (e.g., antenna height, power, directive arrays, etc.), the U.S. Agency may effect special coordination of the frequencies involved.

5. The Use of the 421-430 MHz Band by the Fixed and Mobile Services

5.1 Sharing of this band is carried out by the Agencies within the terms and conditions specified in this section. Figures 1, 2 and 3 represent the text of this section in chart and map form.

5.2 The 421.000-424.9875 MHz and 426.000-429.9875 MHz bands will be used for Fixed and Mobile Services systems which will operate on frequency pairs: one frequency from each band. Mobile systems will operate with the mobile receivers on the lower band and mobile transmitters on the upper band. The 424.9875-426.000 MHz band will also be utilized for Fixed and Mobile Service systems.

5.3 Except as provided in Paragraph 5.4 and Section 6, the 421-430 MHz band will be shared between the two countries as follows:

a) Canada will have unrestricted geographic use of the bands 421.000-423.000 MHz and 425.500-428.000 MHz.
b) The United States will have unrestricted geographic use of the bands 423.0125 - 425.4875 MHz and 428.0125 - 429.9875 MHz.

5.4 In recognition of demographic circumstances, the division of spectrum between Canada and the United States varies from the general sharing provisions of Paragraph 5.3 in the two sectors defined below:

a) Sector I is defined to be the portions of the Coordination Zone in the United States and Canada, bounded on the west by 85°W longitude and on the east by 81°W longitude. In this sector of

the Coordination Zone, the United States will have the unrestricted geographic use of the bands 422.1875 - 425.4875 MHz and 427.1875 - 429.9875 MHz; Canada will have the unrestricted geographic use of the bands 421.000 - 422.175 MHz, and 425.500 - 427.175 MHz.

b) Sector II is defined to be the portions of the Coordination Zone in the United States and Canada bounded on the West by 81°W longitude and on the East by 71°W longitude. In this sector of the Coordination Zone, the United States will have the unrestricted geographic use of the bands 423.8125 - 425.4875 MHz and 428.8125 - 429.9875 MHz; Canada will have the unrestricted geographic use of the bands 421.000 - 423.800 MHz and 425.500 - 428.800 MHz.

5.5 As a result of the special sharing arrangements of Paragraph 5.4, the overlap of frequency bands occurs in the following geographical areas:

5.5.1 The geographical area in Canada is enclosed by the United States-Canada border; the meridian 71°W; and the line beginning at the intersection of 72°20'W and the United States-Canada border, thence running north along the meridian 72°20'W to the intersection of 46°N, thence running east along 46°N to the meridian 71°W. Canada will channel and use the 423.0125 - 423.800 MHz and 428.0125 - 428.800 MHz bands for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 423.0375 to 423.7875 MHz inclusive and 428.0375 to 428.7875 MHz inclusive.

The geographical area in the United States is enclosed by the United States - Canada border; the meridian 71°W; and the line beginning at the intersection of 44°13'N, 71°W, running by great circle arc to the intersection of 45°N and 69°40'W, thence north along the meridian 69°40'W, to the intersection of 46°N, thence running west along 46°N to the intersection of the United States - Canada border. The United States will channel and use the 423.0125 - 423.800 MHz and 428.0125 - 428.000 MHz bands for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 423.025 to 423.775 MHz inclusive and 428.025 to 428.775 MHz inclusive.

Coordination of proposed frequency assignments in the bands 423.0125 - 423.800 MHz and 428.0125 - 428.800 MHz is required in two areas as follows:

(a) The geographical area in Canada is enclosed by the United States-Canada border; the meridian 71°W; and the line beginning at the intersection of 72°W and the United States-Canada border, thence running north along meridian 72°W to the intersection of 45°45'N, thence running along 45°45'N to the meridian 71°W.

(b) The geographical area in the United States is enclosed by the United States-Canada border; the meridian 71°W and the line beginning at the intersection of 44°25'N and 71°W, thence running by great circle arc to the intersection of 45°N and 70°W, thence north along meridian 70°W to the intersection of 45°45'N, thence running west along 45°45'N to the intersection of the United States - Canada border.

5.5.2 Within the land area in the United States enclosed by the line of 81°W longitude, the arc of a circle of 120 km radius centered at the intersection of 81°W longitude and the northern shore of Lake Erie and drawn clockwise from the southerly intersection with 81°W longitude to the westerly intersection with the United States-Canada border and the United States-Canada border, the United States will channel and use the bands 422.1875 - 423.800 MHz and 427.1875 - 428.800 MHz for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 422.200 to 423.775 MHz inclusive and 427.200 to 428.775 MHz inclusive.

Within the land area in Canada enclosed by the line of 81°W longitude, the arc of a circle of 120 km radius centered at the intersection of 81°W longitude and the southern shore of Lake Erie drawn clockwise from the northerly intersection with 81°W longitude to the easterly intersection with the United States-Canada border, and the United States-Canada border, Canada will channel and use the bands 422.1875 - 423.800 MHz and 427.1875 - 428.800 MHz for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 422.2125 to 423. 7875 MHz inclusive and 427.2125 to 428. 7875 MHz inclusive.

5.5.3 Within the land area in the United States enclosed by the line of 85°W longitude, the arc of a circle of 120 km radius centered at the intersection of 85°W longitude and the Ontario-Lake Superior shore, and drawn counter-clockwise from the southerly intersection with 85°W longitude to the easterly intersection with the United States - Canada border, and the United States - Canada border, the United States will channel and use the bands 422.1875 - 423.000 MHz and 427.1875 - 428.000 MHz for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 422.200 to 422.975 MHz and 427.200 to 427.975 MHz inclusive.

Within the land area in Canada enclosed by the line of 85°W longitude, the arc of a circle of 120 km radius centered at the intersection of 85°W longitude and Michigan-Lake Superior shore, drawn counter-clockwise from the northerly intersection with 85°W longitude to the westerly intersection with the United States-Canada border, and the United States-Canada border, Canada will channel and use the bands 422.1875 - 423.000 MHz and 427.1875 - 428.000 MHz for assignments with 16 kHz or less necessary bandwidth on center frequencies spaced 25 kHz apart from 422.2125 to 422.9875 MHz inclusive and 427.2125 to 427.9875 MHz inclusive.

5.6 In order to minimize the need for coordination in the band 421-430 MHz, Effective Radiated Power (ERP) and Effective Antenna Height (EAH) guidelines have been established as provided in Annex C. If these ERP values are exceeded, within the corresponding EAH ranges, coordination is required in accordance with the procedures specified in Arrangement D of this Agreement.

6. Conditions for the Shared Use of the 420-430 MHz Band by the Canadian Fixed and Mobile Services with the United States Radiolocation Service

6.1 Existing United States fixed installation radars, with exception of the installation at Concrete, N.D. and those in Alaska, which will receive or cause harmful interference from or to fixed and mobile

operations in Canadian territory, will restrict their operational use to the 430-450 MHz band except during emergency periods when the United States reserves the right to operate all radiolocation devices on an unrestricted basis. The United States radar at Concrete, N.D. and Canadian fixed and mobile systems in the adjacent border area will be protected from interference by observation in Canada of fixed and mobile system power and height restrictions.

No use of this band by the Fixed and Mobile Services will be allowed to adversely impact the operation of the radar at Concrete, N.D. If the United States reports harmful interference to its radar at Concrete, N.D., which is caused by fixed or mobile operations in Canada, Canada will cooperate in the immediate identification and elimination of such harmful interference. Subsequently the United States will cooperate to attempt to reach a mutually satisfactory resolution of the problem.

6.2 The United States reserves the right, irrespective of other provisions of this Arrangement, to operate in the band 420-430 MHz radiolocation stations onboard fixed wing aircraft. However, the United States will minimize use of this band on flights when they are within possible interference range of fixed and mobile operations in major Canadian population areas. If Canada reports harmful interference to Canadian fixed or mobile operations which is caused by radiolocation transmissions from United States fixed wing aircraft, the United States will cooperate in resolution of such harmful interference to the maximum extent possible.

6.3 Proposed assignments for Canadian fixed and mobile systems which are not in accordance with the constraints specified for mutual compatibility with the radar at Concrete, N.D. and with radars aboard U.S. ships transiting the Strait of Juan de Fuca and Puget Sound and any other proposed assignment whose compatibility with these radiolocation units is in doubt, will be coordinated with the National Telecommunications and Information Administration.

6.4 Experimental research and development transmissions by fixed radiolocation systems in this band in the United States within 250 km of the United States-Canada border will be on a non-interference basis and with notification to Canada.

6.5 Except for operations on fixed wing aircraft, United States tactical and training radiolocation operations in the 420-430 MHz band will be on a non-interference basis.

6.6 Except for the state of Alaska, any future fixed installation radiolocation system proposed for United States operation within 250 km of the United States-Canada border which would normally operate in the 420-430 MHz band will be subject to prior coordination with Canada. The United States will confer with Canada concerning proposed modifications to the characteristics of current radiolocation systems or their replacements, if such modifications or replacements could impose further restrictions on Canadian operations in the Fixed and Mobile Services. In the event that radiolocation operations in the band 420-430 MHz, at Concrete, N.D. or on ships in the Strait of Juan de Fuca are terminated the United States will notify Canada, and the special arrangements herein will cease to apply in the affected Canadian area.